BOTANICAL MUSEUM LEAFLETS
HARVARD UNIVERSITY

MBRIDGE, MASSACHUSETTS, MARCH 31, 1938 VOL. 5, NO. 9

CASTILLA OR CASTILLOA?

BY

ALBERT F. HILL

IN A RECENT BOOK REVIEW, Dr. A. B. Rendle[9] commented on the use of the generic name *Castilla* for the Panama or Central American Rubber Tree, pointing out that it should be *Castilloa.* Although the question as to the correct name for this genus has been discussed in the past by Cook[5], Pittier[7] and others, it may be worth while to restate the essential facts.

In 1793, Vicente Cervantes delivered a lecture on botany at the Real Jardín Botánico in Mexico City during the course of which he described the rubber tree of Mexico and Central America and proposed for it the name *Castilla elastica.* The following year (1794), the text of Cervantes' lecture was published[4] in a Suplemento á la Gazeta de Literatura de Mexico, together with a figure of *Castilla elastica.* The generic name was chosen to commemorate Juan Diego del Castillo (1744-1793), a Spanish pharmacist and economic botanist, whose death occurred while he was compiling a flora of Mexico.

In 1805, with a view to rendering more accessible various botanical articles which had appeared in obscure journals, Charles Koenig[6] of the British Museum published translations of nine rare or little known contributions. Among these was Cervantes' article. In the translation, however, the generic name was altered to *Castilloa.*

Although Koenig gave no reason for the change, the extra vowel was in all probability introduced in order to make the name grammatically correct, and was not the result, as Pittier states, of a typographical error, "a slip of the pen or the officious but ignorant interference of the translator."

Whatever the reason for the change, the name *Castilloa* became firmly established in literature, and its use was continued unquestioned for nearly a hundred years.

In 1903, however, O. F. Cook[5] (in his memoir on the Central American Rubber Tree) pointed out that the use of *Castilloa* for the genus could be "justified by no recognized rule of botanical nomenclature." Pittier[7], who monographed the genus in 1910, concurred in this opinion. Certainly there have been no recent changes in the laws of priority or other rules of nomenclature that would make the use of *Castilloa* any more permissible at the present time.

In America at least, *Castilla* is quite generally considered to be the name which must be taken up for this genus, even though *Castilloa* may be grammatically correct. As evidence of this, recent publications of such authorities as Bailey[1], Britton and Wilson[2], Record and Mell[8], and Standley[10,11,12,13] may be cited. There is evidence also that taxonomists in other parts of the world are reverting to the older name. Burkill[3], for example, uses *Castilla* and comments briefly on the "mischance" which was responsible for the adoption of *Castilloa*.

Although over thirty years have elapsed since Cook pointed out that *Castilla* was the correct name for the rubber trees of Central America and Mexico, it is not at all surprising that most of the literature on economic botany continues to use the more familiar *Castilloa*. It is strange, however, that the competent taxonomists in England and on the continent continue to condone the use of a name that is contrary to the established rules of botanical nomenclature.

BIBLIOGRAPHY

1. Bailey, L.H. and E.Z. Bailey. Hortus. The Macmillan Co. New York. 1930.
2. Britton, N.L. and P. Wilson. Botany of Porto Rico and the Virgin Islands. Vol. V of A Scientific Survey of Porto Rico and the Virgin Islands. N.Y. Acad. Sciences. New York. 1923.
3. Burkill, I.H. A Dictionary of the Economic Products of the Malay Peninsula. Oxford University Press. Oxford. 1935.
4. Cervantes, V. Discurso pronunciado en real jardin botanico de Mexico. De resina elastica generatim, et de arbore Novae Hispaniae resinam hujusmodi producente, speciatim. Suplemento á la Gazeta de Literatura de Mexico, 2 de Julio 1794.
5. Cook, O.F. The Culture of the Central American Rubber Tree. U. S. Dept. Agric., Bur. Plant Industry, Bull. 49. Washington. 1903.
6. Koenig, C. (editor and translator). Tracts relative to Botany, translated from different languages. Phillips and Pardon. London. 1805.
7. Pittier, H. A Preliminary Treatment of the Genus Castilla. Contrib. U. S. Nat. Herb. 13 (1910) 247-249.
8. Record, S. J. and C. D. Mell. Timbers of Tropical America. Yale University Press. New Haven. 1924.
9. Rendle, A.B. Review of Economic Botany, a Text Book of Useful Plants and Plant Products, by Albert F. Hill. McGraw-Hill Book Co. New York and London. 1937. In Journ. Bot. 75 (1937) 334-335.
10. Standley, P. C. Trees and Shrubs of Mexico. Contrib. U. S. Nat. Herb. 23 (1920-1926).
11. —— Flora of the Panama Canal Zone. Contrib. U. S. Nat. Herb. 27 (1928).
12. —— Flora of the Lancetilla Valley Honduras. Field Mus. Nat. Hist. Bot. Ser. 10 (1931).
13. —— Flora of Costa Rica. Field Mus. Nat. Hist. Bot. Ser. 18 (1937).

ORCHID STUDIES, V

BY

LOUIS O. WILLIAMS

THROUGH THE KINDNESS of Dr. William R. Maxon, Curator of the United States National Herbarium, the orchids collected by Joseph F. Rock in Yunnan Province, China, and adjacent Burma in 1922-1923 have been made available for study. The collection contains 157 numbers of orchids, many of which are of unusual interest. In addition to the two species described below, there are several others which possibly will prove to be new when more critical studies and comparisons can be made.

In addition to the collection of Chinese orchids mentioned above, an interesting Philippine species of Taeniophyllum (which belongs to the genus segregated by Dr. Rudolf Schlechter as Geissanthera) has made the study of several allied species necessary. This species and its allies are discussed, and an additional Philippine species of Taeniophyllum (subgenus Eutaeniophyllum) is described.

Orchis constricta *L. O. Williams sp. nov.*

Herba parva, terrestris, 4–8 cm. vel ultra alta. Folia duo, basalaria, late elliptica, acuta vel acuminata, basi leviter petiolata. Bracteae inflorescentiae lineari-lanceolatae, acutae. Inflorescentia uniflora. Sepalum dorsale rhombico-lanceolatum, obtusum, leviter naviculare, trinervium. Sepala lateralia late lanceolata, obtusa, falcata, obliqua, trinervia. Petala lineari-lanceolata, obtusa vel acuta, binervia. Labellum trilobatum; lobi laterales basi labelli, lineari-lanceolati, acuti; lobus medius rhombicus, obscure crenulatus vel integer; calcar elongatum, curvatum, prope apicem constrictum.

A small terrestrial herb 4–8 cm. or more tall. Tubers probably fusiform, about 1 cm. long. Scape filiform, not greatly exceeding the leaves in length. Leaves two, basal, broadly elliptic, acute or acuminate, tapering into a short petiole at the base, 2–5 cm. long, 0.8–2 cm. broad, probably becoming longer when mature. Inflorescence 1-flowered. Floral bract linear-lanceolate, acute or acuminate, 6–12 mm. long, 1–3 mm. broad. Dorsal sepal rhombic-lanceolate, obtuse, slightly navicular, 3-nerved, about 8 mm. long and 4 mm. broad. Lateral sepals broadly lanceolate, obtuse, falcate and somewhat asymmetrical, 3-nerved, about 8 mm. long and 4 mm. broad. Petals linear-lanceolate, obtuse or acute, 2-nerved, about 6 mm. long and 1.5 mm. broad. Lip 3-lobed; lateral lobes linear-lanceolate, acute, from the base of the lip about 7 mm. long and 1.5 mm. broad; mid-lobe rhombic, obtuse, obscurely crenulate or entire, about 10 mm. long and 6 mm. broad; spur very long and strongly curved toward the apex, probably somewhat flattened laterally, constricted near the apex, enlarged and saccate at the apex, 22–30 mm. long, with its throat 3–5 mm. in diameter, its constriction 1–2.5 mm. in diameter, and its saccate portion about 5 mm. long and 3–4 mm. in diameter.

Orchis constricta is not closely allied to any other species of Orchis known to the author. The following characters serve to distinguish the species: the one-flowered inflorescence, the very long curved spur which is constricted near the apex and the comparatively large size of the flower.

China: Yunnan Province Wua chje, 3 days north of Muli, Yangtze watershed, Prefectural District of Likiang, eastern slope of Likiang Snow Range. In forest, flowers purple. May-October 1922. *Rock 5592* (Type in Herb. Ames No. 46474).

Oberonia latipetala *L. O. Williams sp. nov.*

Herba parva, epiphytica, usque ad 12 cm. alta. Folia equitantia, lanceolata, acuta vel acuminata, coriacea. Bracteae inflorescentiae aristatae, basi ovatae. Inflorescentia spicata cum floribus confertis. Sepalum dorsale oblongo-lanceolatum, obtusum, sine nervum, dorso paulo echinatum. Sepala lateralia sepalo dorsali similia. Petala ovalia, obtusa, trinervia, minute ciliata. Labellum simplex, obovatum, infra medium constrictum, basi auriculatum, apiculatum, ciliatum et supra pubescens.

A small epiphytic herb, up to about 12 cm. tall. Roots few, small, glabrous or possibly somewhat pubescent. Leaves equitant, lanceolate, acute or acuminate, coriaceous, 1.5–5 cm. long, 0.3–0.7 cm. broad. Inflorescence spicate, many-flowered, dense. Floral bracts ovate-lanceolate, the upper ones acuminate, the lower ones becoming smaller and long-aristate. Dorsal sepal oblong-lanceolate, obtuse, without nerves, minutely echinate dorsally, about 2 mm. long and 1 mm. broad. Lateral sepals similar to the dorsal sepal. Petals oval, obtuse, 3-nerved, minutely ciliate, 2–2.5 mm. long, 1.5–2 mm. broad. Lip simple, obovate, somewhat constricted below the middle and inconspicuously auriculate at the base, short-apiculate at the apex, 3-nerved with the median nerve often obscure, ciliate, finely pubescent on the upper surface, 1–1.5 mm. long, 0.75–1.25 mm. broad. Column about 0.5 mm. long.

Oberonia latipetala is not closely allied to any species known to occur in China or India. It may be distinguished by the very broad petals, by the sepals which are minutely echinate dorsally and by the simple lip which is slightly auriculate at the base and somewhat constricted below the middle.

China: Yunnan Province, camp at Ya Tau Pa, between Tengyueh and Lungling. Epiphyte, flowers greenish. October 21, 1922. *Rock 7117* (Type in Herb. Ames No. 46475).

TAENIOPHYLLUM *Blume*

Taeniophyllum is one of those perplexing genera of orchids of which the collector usually finds but a few plants. The flowers are delicate and apparently never produced abundantly; hence material finding its way into herbaria is often indeterminable.

In the Philippine Islands the genus is represented by six described species. The author believes that this number might be doubled, for there are specimens in the Ames Herbarium which seem to indicate that there may be an equal number of undescribed species in the Philippines. The material at hand is adequate for the description of two of these species, but it is thought advisable to await more complete material before attempting to identify the others.

The species of *Taeniophyllum* previously known to be natives of the Philippines have all belonged to the subgenera *Eutaeniophyllum* and *Microtatorchis.* Another subgenus is proposed, to which a new Philippine species and two old species are referred.

TAENIOPHYLLUM subg. **Geissanthera** *(Schltr.) L. O. Williams comb. nov.*

Geissanthera Schltr. in Schumann & Lauterbach Nachtr. Fl. Deutsch. Schutzgeb. (1905) 231, t. 12 B—J.J.Sm. Nova Guinea 8 (1909) Orch. 129.

Taeniophyllum (subg. Geissanthera) **papuanum** *(Schltr.) L. O. Williams comb. nov.*

Geissanthera papuana Schltr. in Schumann & Lauterbach Nachtr. Fl. Deutsch. Schutzgeb. (1905) 232.

Taeniophyllum (subg. Geissanthera) **tubulosum** *(J.J.Sm.) L. O. Williams comb. nov.*

Geissanthera tubulosa J.J.Sm. in Bull. Dépt. Agric.

Ind. Néerl. No. 19 (1908) 24—J.J.Sm. Nova Guinea 8 (1909) Orch. 129, t. 44.

Taeniophyllum (subg. Geissanthera) **bracteatum** *L.O. Williams sp. nov.*

Herba parva, epiphytica, usque ad 4 cm. alta. Folia parva, basalaria, oblongo-lanceolata, cum mucrone aristato longo. Pedunculus leviter fractiflexus, cum bracteis a basi usque ad apicem. Bracteae basi cum stipularum aristatarum paribus, foliis similes. Sepala lanceolata, acuta. Petala sepalis similia sed paulo angustiora. Labellum lanceolatum, acutum, basi dilatatum, parte dilatata lobos laterales formanti. Columna subgeneris.

A small acaulescent (or semiacaulescent) epiphytic herb, about 4 cm. tall. Roots apparently somewhat flattened, those seen not longer than the stem and inflorescence. Leaves basal, small, lanceolate, with a long aristate mucro, 10 mm. or less long, about 2 mm. broad, the mucro 1–2 mm. long. Peduncle slightly fractiflex, strongly bracteate to the base. Bracts oblong-lanceolate, mucronate, about 3–9 mm. long; with a pair of aristate, basal, stipule-like processes. Sepals lanceolate, acute, about 3 mm. long and 0.75 mm. broad. Petals similar to the sepals but slightly narrower. Lip lanceolate, acute, about 3 mm. long, dilated toward the base, the dilated portion forming the lateral lobes which are normally erect or infolded. Spur scrotiform, about 1–1.5 mm. long.

Taeniophyllum bracteatum is most closely allied to *T. papuanum* from which it may be easily distinguished as follows:

T. bracteatum	*T. papuanum*
Perianth parts about 3 mm. long.	Perianth parts about 6 mm. long.
Sepals and petals acute.	Sepals and petals acuminate.
Lip subsimple, merely broadened at the base.	Lip not simple, with two lateral teeth.

Philippine Islands: Negros, Canlaon Volcano. April 1910. *Merrill 7010* (Type in Herb. Ames No. 11839).

Taeniophyllum (subg. Eutaeniophyllum) **saccatum** *L. O. Williams sp. nov.*

Herba parva, epiphytica, acaulescens. Pedunculus filiformis, papillifer. Bracteae inflorescentiae lanceolatae. Sepalum dorsale lineari-lanceolatum, acutum, uninervium, leviter carinatum. Sepala lateralia acuta vel obtusa. Petala lanceolata, acuta, uninervia. Labellum lanceolatum, prope apicem cum callo donatum, basi saccata; lobi laterales rotundi.

A small epiphytic acaulescent herb. Roots flattened, strongly 1-nerved, 2–3 mm. broad, mostly less than 10 cm. long. Peduncle filiform, papilliferous, fractiflex, commonly less than 7 mm. long. Bracts of the inflorescence lanceolate, usually about 2 mm. apart, about 1 mm. long. Perianth parts ocellate with crystalline inclusions, more or less fleshy, the sepals and petals adnate at the base for a short distance. Dorsal sepal linear-lanceolate, acute, 1-nerved, about 3 mm. long and 0.75 mm. broad. Lateral sepals lanceolate, acute or obtuse, 3–3.5 mm. long and 0.75–1 mm. broad. Petals lanceolate, acute, 1-nerved, about 2.5 mm. long and 1 mm. broad. Lip 3-lobed, broadly lanceolate, about 3.5 mm. long, with a thickening or callus near the apex; lateral lobes inconspicuous, rounded, not separated from the mid-lobe by a sinus; at the base of the lip there is a large saccate spur which is strongly constricted at the neck, is directed forward, and is about 3.5 mm. long and 1.5 mm. in diameter. Column short, with a pair of oblong-ovate stelidia; rostellum bifid.

Taeniophyllum saccatum is most easily distinguished from all of the other known Philippine species by the much enlarged saccate portion of the spur. The species most closely allied to it seems to be *T. Elmeri*, which is similar in the form of the inflorescence and in facies, but the structure of the lip together with the saccate spur serves to differentiate the two species.

PHILIPPINE ISLANDS, Leyte: Jaro, Buenavista. Epiphyte. At 500 meters altitude. March 15, 1914. *Wenzel 352;* Jaro, Masaganap. Epiphyte in forest. At 750 meters altitude. February 11, 1914. *Wenzel 265;* Jaro, Masaganap. Epiphyte in forest. At 600 meters altitude. March 9, 1914. *Wenzel 337;* November 20, 1914. *Wenzel 687;* Jaro, Masaganap. Forest. At 600 meters altitude. November 16, 1914. *Wenzel 669;* Jaro, Masaganap. Epiphyte in forest. At 600 meters altitude. November 22-23, 1914. *Wenzel 711;* Jaro, Masaganap. Forest. At 700 meters altitude. February 19, 1915. *Wenzel 885* (TYPE in Herb. Ames No. 44135); Jaro, Masaganap. Epiphyte in forest. At 700 meters altitude. March 2, 1915. *Wenzel 895.*

CORALLORRHIZA STRIATA *Lindley*, A MIXTURE

BY

LOUIS O. WILLIAMS

IN STUDYING THE ORIGINAL DESCRIPTION of *Corallorrhiza striata* Lindley (Gen. & Sp. Orch. Pl. (1840) 534), it was found to disagree with the interpretation generally given the species by American authors. *C. striata* was described as having a trilobulate lip, a character which is unknown in *C. striata* as commonly understood.

Lindley's type specimen is a mixture of *C. striata*, as that species is usually interpreted, with another species of Corallorrhiza, very probably *C. maculata* Raf. Fortunately there is a good photograph of the type specimen in the Ames Herbarium. This photograph of the Lindley type shows parts of three plants collected by Douglas in "N. W. America" and a sketch (by Lindley) of a flower and lip. Only the left hand inflorescence is referable to *C. striata* in its present accepted sense, and is the only material having striate flowers. Consequently this material should be accepted as the true type of Lindley's *C. striata*, in spite of the discrepancies written into the original description.

A probable duplicate of the Douglas collection, on which Lindley's species is based, is to be found in the Gray Herbarium: it is *C. striata* of traditional usage.

If we consider the technical characters of Lindley's description, the sketch of the flower which he made and the fact that most of the material upon which he based the species is probably *C. maculata*, one might feel justified in reducing it to synonymy under *C. maculata*. There are, however, several considerations which argue for the retention of the name *C. striata* in the traditional usage:

1. The name *striata* must have been taken from that

part of the type which had striate perianth parts, hence the name would not apply well to *C. maculata.*

2. The name is well established in botanical literature and there has been little or no confusion in its application.
3. The type sheet bears a specimen of *C. striata* and the description applies to that specimen, in major part.
4. To take up another name for the plant would cause confusion and serve no useful purpose.

It is suggested, therefore, that the use of the name *C. striata* Lindl. be continued in the traditional sense. Toward this end it is proposed that the specimen on the left side of Lindley's type sheet be considered as the type and that the other specimens and the sketch on the sheet be disregarded in the typification of the species.